

Amendments to the Claims

1. (currently amended) A method for providing a recommendation list from a plurality of items, comprising the steps of ~~executing in a data processing system:~~

specifying an adaptable constraint filter to apply to recommendation requests having a first set of attributes, wherein the recommendation requests comprise requests from a plurality of users ~~using constraint forming rules, to select ones of the items satisfying a constraint;~~

receiving a recommendation request having the first set of attributes;

selecting the ones of the plurality of items that satisfy the constraint filter associated with the recommendation request;

computing a predicted value ~~values~~ based on a recommendation filter, for each of the selected ones of the items; and

appending the selected ones of the items meeting predetermined criteria to the recommendation list.

2. (original) The method of claim 1, wherein appending selected ones of the items further includes appending the selected ones of the items to the recommendation list when the predicted value exceeds a predetermined number.

3. (original) The method of claim 1, wherein appending selected ones of the items further includes appending a predetermined number of items to the list.

4. (currently amended) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint containing a free variable ~~variables~~ to the ones of the items.

5. (currently amended) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint containing a bound expression ~~expressions~~.

6. (currently amended) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a ~~Boolean~~-constraint filter including a Boolean expression.

7. (currently amended) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint ~~signifies~~ includes an equality expression.

8. (currently amended) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint ~~signifies~~ includes a category membership expression.

9. (original) The method of claim 1, wherein computing the predicted value further includes evaluating the selected ones of the items with collaborative filtering.

10. (currently amended) The method of claim [[1]] 3, further comprising the step of:

truncating the recommendation list when [[a]] the predetermined number of the selected ones of the items on the recommendation list has been met.

11. (currently amended) The method of claim [[1]] 4, wherein selecting the ones of the items that satisfy the constraint filter further includes :

obtaining data from a user to be used as a value for the free variable in the constraint; and

adding the data to the constraint filter.

12. (currently amended) The method of claim 1, wherein specifying [[a]] the adaptable constraint filter further includes :

obtaining ~~the~~ a constraint ~~from an operator~~; and

storing the constraint ~~filter~~ in memory.

13-15. (canceled)

16. (currently amended) An apparatus ~~designed to provide~~ for providing a recommendation list from a plurality of items in a data processing system, comprising:
a processing component configured to process instructions for selecting items from the plurality of items, wherein the processing component includes by:

~~applying a constraint filter to ones of the items;~~

~~applying a recommendation filter to ones of the items; and~~

means for determining an order for invoking the constraint filter ~~applying~~
~~step~~ and the recommendation filter ~~applying~~ ~~step~~; and

a recommender component configured to append the selected items to a recommendation list based on the constraint filter and the recommendation filter.

17. (currently amended) The apparatus of claim 16, wherein the processing component further includes means for computing ~~computes~~ predicted values based on the recommendation filter.

18. (currently amended) The apparatus of claim 16, wherein ~~the processing component~~ means for determining an order for invoking the constraint filter includes
means for further determining ~~determines~~ the order of the filters to apply to the plurality of the items based on the cost of the filters; and

wherein the processing component further includes:

means for applying ~~applies~~ the constraint filter first when it is determined that the cost of the constraint filter is lower than the cost of the recommendation filter~~[[;]]~~, and

means for applying ~~applies~~ the recommendation filter first when it is determined that the cost of the recommendation filter is lower than the cost of the constraint filter.

19. (currently amended) The apparatus of claim ~~[[16]]~~ 38, wherein the ~~processing component applies a constraint filter on a boolean constraint containing~~ includes a free variable ~~variables~~.

20. (currently amended) The apparatus of claim ~~[[16]]~~ 38, wherein the ~~processing component applies a constraint filter containing~~ includes a bound expression ~~expressions~~.

21. (currently amended) The apparatus of claim [[16]] 38, wherein the ~~processing component applies a constraint filter based on~~ includes a boolean expression constraint.

22. (currently amended) The apparatus of claim [[16]] 38, wherein the ~~processing component applies a constraint filter that signifies~~ includes a category membership expression.

23. (currently amended) The apparatus of claim [[16]] 38, wherein the ~~processing component applies a constraint filter that signifies~~ includes an equality expression.

24. (currently amended) The apparatus of claim 16, wherein the ~~processing component~~ the recommendation filter includes a collaborative filtering module that computes predicted values by evaluating each ones of the plurality of items with collaborative filtering.

25. (original) The apparatus of claim 16, wherein the recommender component is further configured to truncate the recommendation list when a predetermined number of the ones of the items on the recommendation list has been met.

26. (currently amended) The apparatus of claim 16, further comprising an input component configured to :

obtain the a ~~constraint from an operator~~; and
store the constraint ~~filter~~ in a memory.

27. (original) The apparatus of claim 16, further comprising an input component configured to:

obtain data from a user; and
add the data to the constraint filter.

28. (previously presented) The apparatus of claim 16, wherein the processing component is further configured to adaptively specify the constraint filter, using a set of constraint-forming rules.

29. (currently amended) A method of generating [[a]] recommendation lists from a plurality of items having assigned category memberships representing attributes of the items, comprising:

receiving a plurality of recommendation requests, wherein the recommendation requests comprise requests from a plurality of users ~~request, the recommendation request including a value for a free variable;~~

applying, for each recommendation request, a series of filters to each of the items, the series comprising a constraint filter ~~based on a constraint comprising the free variable~~ and a recommendation filter for furnishing a predicted rating value, wherein the constraint filter is selected based on attributes associated with the recommendation request; and

generating, for each recommendation request, a recommendation list based on the predicted rating value ~~or values~~ for the item ~~or items~~ that pass the constraint filter and the recommendation filter.

30. (currently amended) The method of claim 29 further comprising:

building the a constraint using constraint forming rules; and

incorporating the constraint into the constraint filter.

31. (previously presented) The method of claim 29 wherein the applying step comprises:

determining a lowest cost order of applying the constraint filter and the recommendation filter; and

applying the constraint filter and the recommendation filter in the lowest cost order.

32. (currently amended) The method of claim 31 wherein the order determining step comprises:

~~providing the constraint filter with a generation interface and a rejection interface;~~

~~providing the recommendation filter with a generation interface and a rejection interface;~~

determining a cost for a first order, the first order being applying the ~~generation interface of the~~ constraint filter before applying the ~~rejecting interface of the~~ recommendation filter;

determining a cost for a second order, the second order being applying the ~~generation interface of the~~ recommendation filter before applying the ~~rejection interface of the~~ constraint filter; and

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof.

33. (previously presented) The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on predicted rating values of the items that pass the constraint filter and the recommendation filter being in excess of a specified rating value.

34. (previously presented) The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on a specified number of the items that pass the constraint filter and the recommendation filter with highest predicted rating values.

35. (currently amended) A method of generating a recommendation from a plurality of items having assigned category memberships representing attributes of the items, comprising:

building a constraint to apply to recommendation requests having a first set of attributes using constraint forming rules, wherein the recommendation requests include requests from a plurality of users;

incorporating the constraint into a constraint filter [[.]];

receiving a recommendation request having the first set of attributes;

applying a series of filters to each of the plurality of items in response to the recommendation request, the series comprising a recommendation filter for furnishing a predicted rating value, and the constraint filter; and

generating a recommendation based on the predicted rating value or values for the item or items that pass the constraint filter and the recommendation filter.

36. (currently amended) A method of generating a recommendation list from a plurality of items having assigned category memberships representing attributes of the items, comprising:

- building a constraint using constraint forming rules;
- incorporating the constraint into a constraint filter ~~having a generation interface and a rejection interface~~;
- receiving a recommendation request;
- determining a cost for a first order, the first order being applying the ~~generation interface of the constraint filter before applying the rejection interface of the recommendation filter~~;
- determining a cost for a second order, the second order being applying the ~~generation interface of the recommendation filter before applying the rejection interface of the constraint filter~~;
- establishing one of the first and second orders as the lowest cost order based on the respective costs thereof;
- applying a series of filters to each of the plurality of items in response to the recommendation request, the series comprising the recommendation filter and the constraint filter in the lowest cost order; and
- generating a list of recommendations based on the predicted rating values for the items that pass the constraint filter and the recommendation filter.

37. (previously presented) The method of claim 36 wherein:
the building step comprises incorporating a free variable into the constraint; and
the recommendation request receiving step comprises receiving a value of the free variable.

38. (new) The apparatus of claim 16, further comprising a memory, wherein the memory includes a constraint.